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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,287	06/29/2004	Shinichi Sasaki	042424	5209

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP		
1250 CONNECTICUT AVENUE, NW		
SUITE 700		
WASHINGTON, DC 20036		

EXAMINER	
CHEN, WEN YING PATTY	

ART UNIT	PAPER NUMBER
2871	

MAIL DATE	DELIVERY MODE
12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,287

Applicant(s)

SASAKI ET AL.

Examiner

W. Patty Chen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-9 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Amendment filed on Sept. 19, 2007 has been entered. Claim 4 is cancelled per the Amendment filed, therefore, claims 1, 2 and 5-9 remain pending in the current application.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. The current Office Action will replace the previously filed Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

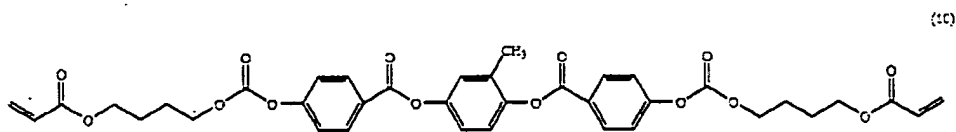
Claims 1 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichihashi et al. (US 6519017) in view of Kameyama et al. (US 6342934) further in view of Meyer et al. (US 6773766) further in view of Conner et al (US 5548422).

With respect to claim 1: Ichihashi et al. disclose in Figure 6 a polarizing plate with optical compensation function, the polarizing plate comprises a polarizing layer (element RP) and an optically compensating layer, wherein

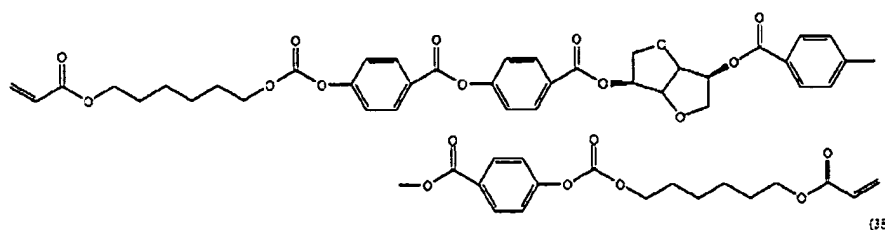
the optically compensating layer comprises an optically compensating A-layer (element $\lambda/4$) comprising a polymer film (Column 7, lines 60-61), and an optically compensating B-layer (element Ch) comprising a cholesteric liquid crystal layer (Column 7, lines 23-24), the optically compensating A-layer being on a side of the optically compensating B-layer opposed to the polarizing layer (element RP).

Ichihashi et al. failed to disclose that the optically compensating A-layer meets the requirement of $20nm \leq Re \leq 300nm$ and $1.2 \leq Rth/Re$, where $Re = (n_x - n_y) \cdot d$ and $Rth = (n_x -$

nz)*d and further that the cholesteric liquid crystal layer is formed from a liquid crystal monomer represented by the chemical formula:



and a polymerizable chiral dopant represented by the chemical formula:



However, Kameyama et al. teach the use of an enhanced $\lambda/4$ wavelength plate for changing the circularly polarized light into linearly polarized light and having the properties of Re in the range of 110 to 700nm, Rth/Re in the range of 1.5 or less, thus result in overlapping of ranges a prima facie case of obviousness exists [*MPEP 2144.05*] and Meyer et al. disclose in Column 11 line 65 through Column 18, wherein a cholesteric liquid crystal layer comprises of liquid crystal monomer and a polymerizable chiral dopant having the chemical formula shown above.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a polarizing plate as taught by Ichihashi et al. wherein the $\lambda/4$ wavelength plate is substituted with the one as taught by Kameyama et al. with the specific optical properties, since Kameyama et al. teach that such $\lambda/4$ wavelength plate allows the circularly polarized light transmitted to become polarized without changes in color (Column 9, line 64 through Column 10, line 6) and wherein the cholesteric liquid crystal layer comprises of

liquid crystal monomer and a polymerizable chiral dopant having the chemical formula as taught by Meyer et al., since Meyer et al. teach that such cholesteric liquid crystal layer exhibits excellent optical properties such as wide range of light reflection property (Column 12, lines 36-42).

Ichihashi et al. disclose in Column 5 lines 54-58 and Column 18 lines 22-28 that the cholesteric liquid crystal layer functions as a RGB color filter, which is understood by one of ordinary skill in the art as evident by Conner et al. in Column 9 lines 8-35 that the cholesteric liquid crystal layer selectively reflects wavelengths of the visible spectrum that matches the spiral pitch of the CLC layer. Conner et al. further explain in Column 6 line 38 through Column 7 line 21 and Figures 2-4 that all wavelengths are passed through the CLC layer, but to transmit red, wavelengths from about 400-600nm are selectively reflected; to transmit green, wavelengths of about 400-500nm and 600-700nm are selectively reflected; and to transmit blue, wavelengths from about 500-700nm are selectively reflected.

Therefore, the cholesteric liquid crystal layer disclose by Ichihashi et al. that functions as a color filter has a selective reflection wavelength range not larger than 350nm (wherein as evident by Conner et al., the selective reflection wavelength range of a cholesteric liquid crystal color filter layer is about 200nm with respect to each of the color regions, which is not larger than 350nm).

As to claim 5: Kameyama et al. further disclose in Column 11 lines 14-22 that the $\lambda/4$ wavelength plate comprises at least one of an alignment layer and a base, therefore the polarizing plate comprises at least one of an alignment layer and a base.

As to claim 6: Kameyama et al. further disclose in Column 11 lines 14-22 that the $\lambda/4$ wavelength plate is a liquid crystal film.

As to claims 7-9: Ichihashi et al., Kameyama et al. and Meyer et al. disclose all of the limitations set forth in the previous claims, Ichihashi et al. further disclose in Figure 6 an image display comprising the polarizing plate as claimed such that the polarizing plate (elements $\lambda/4$, Ch and RP combined) is arranged on at least one surface of the liquid crystal cell.

Ichihashi et al., Kameyama et al. and Meyer et al. failed to specifically disclose that a pressure-sensitive adhesive is arranged on one of the surfaces of the polarizing plate such that the polarizing plate is bonded to the liquid crystal cell.

However, Kameyama et al. teach in Column 14 line 50 through Column 15 line 19 of using pressure-sensitive adhesive layer as an interconnecting layer between the optical elements in a liquid crystal display device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a polarizing plate as taught by Ichihashi et al., Kameyama et al. and Meyer et al. wherein a pressure-sensitive adhesive layer is used for bonding as taught by Kameyama et al., since Kameyama et al. teach that by using pressure-sensitive adhesive layers for bonding optical elements helps to prevent changes in the refractive index generated by photoelastic deformation (Column 14, line 50 through Column 15, line 19).

Allowable Subject Matter

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

None of the prior arts either alone or in combination fairly teach or suggest that an angle formed by an absorption axis of the polarizing layer and a slow axis of the optically compensating A-layer is not smaller than 85° and not larger than 95° .

Therefore, claim 2 is deemed non-obvious and inventive over the prior arts, thus is allowable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. Patty Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

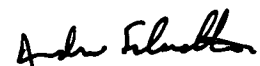
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W. Patty Chen
Examiner
Art Unit 2871

WPC
12/07/07


ANDREW SCHECHTER
PRIMARY EXAMINER